

HOW TIMES HAVE CHANGED

A Manual of Menstruation

ITS PURPOSE, FUNCTION, CARE



Prepared from historical and scientific data by

TAMPAX INCORPORATED, Palmer, Mass.

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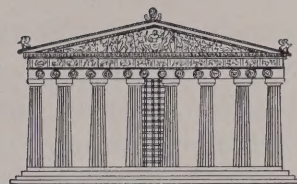
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HOW TIMES



HAVE CHANGED

THE teachers of today exert an influence that extends far beyond the classroom and the exact subjects of the official curriculum. This is especially true in the departments of home economics and physical training of girls. Teachers in these fields often gain an insight into their pupils' lives that is denied to doctors, nurses or even parents. Some girls volunteer their confidences, while others require patience and continuous association, particularly when the specific problem is *menstruation*.

Concerning this very feminine subject of menstruation, times have certainly changed! A look through the family album of 1900 usually brings plenty of amusement, but it brings also a realization of the handicaps surrounding the female half of the population even in grandma's time. Skirts that swept the sidewalks, voluminous petticoats, bathing suits as heavy as a tailor-made costume — these were the *obvious* burdens that kept women in their place. But beyond these there were other items of dress and equipment that helped to take the joy out of life, physically and mentally.



Girls and young women of these 1940's live in a world of new methods and new products relating to menstruation and their lives are made easier thereby. As recently as the start of the First World War, the usual device was a cloth bandage or napkin either home-made or machine-made, which required continual soaking, washing and drying (as privately as possible) all during the menstrual period. No *disposable* products (either external pads or internal tampons) had yet become available, and the method just described differed in no essential way from that in use at the time of the American Revolution.

In fact, these same bandages or similar ones, were employed still further back in ancient Roman times, as well as by various primitive peoples. The Maori women of New Zealand made theirs of fine moss and burned them afterwards. The Amziba women of Africa — and those of Nyassa also — used cloth and vegetable fiber "bandages" but the record does not show that they burned them like the Maoris. All in all, the life of the menstruating woman was a rather miserable one, considered simply from the

viewpoint of physical inconvenience and lack of proper methods and appliances — and this situation was scarcely any better in the time of the Gibson Girl than it was in the time of the Roman Empire.

However, there is another striking difference between our own times and those of our forefathers. We refer to the mental attitude toward the subject of menstruation.



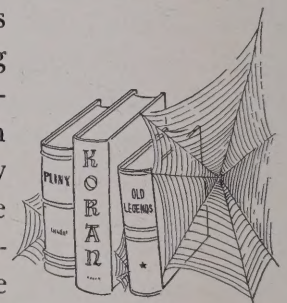
This change in point of view is important because it is still incomplete, still in progress, and many girl pupils come to class from homes that are not yet free from influence of ancient superstitions concerning the nature and care of menstruation. It may seem a little harsh to use the word “superstition” to describe the beliefs of some of their mothers. To their minds, perhaps, all bodily functions should be discussed as little as possible. Not so long ago, in England and Scotland, the stomach was not to be mentioned “in company” and there grew up the custom of referring to that organ as “Little Mary.” Small wonder, then, that menstruation should fall under the ban of Mrs. Modesty, being associated with the idea of sex and the idea of uncleanness, and thus under a double taboo.

Yet “superstition” is after all, not a far-fetched term to apply to many of the ideas surrounding the subject of menstruation. Certainly there have been enough real superstitions in the past — from the ancient Greeks, Romans and Hebrews right down to our own century! For instance, by many peoples the moon was believed to have a very bad effect on women, possibly because the menstrual interval sometimes coincided with the moon’s changes and the variation of the tides. James Fenimore Cooper (writing about 1830) makes two characters in one of his novels discuss this subject. Some North American Indian

tribes believed the moon to be the First Woman. At her waning she was having her “sickness.” Curiously in some parts of Europe is found peasant folk lore to the same effect — the moon menstruates and “moon blood” is observed in the skies at such times.

In the Pentateuch section of the Bible rigid standards of conduct are imposed on the menstruating woman. Due to an understandable lack of knowledge concerning the nature of menstruation, these practices differed widely from modern scientific views. Many early Moslem beliefs were similarly rigid. All books of the Mohammedan theology contained a chapter referring to menstruating women. During her period a woman was not allowed to say her prayers, nor to touch or read the Koran, nor to enter a mosque.

All through the history of civilized races and primitive tribes the most persistent idea associated with menstruation is the one of “uncleanness.” Mosaic law, so greatly concerned with hygienic measures, quite naturally took this view; nearly everything was “clean” or “unclean” to the Jewish people. And as the early Christians shared the Old Testament (Leviticus 15-19), these same beliefs were naturally held by them. Among the people of ancient India, also, menstruating women were considered definitely contaminating and spent their periods in seclusion. A woman of the Jain sect, in India, was not only forbidden religious worship, but could not touch copper or bronze utensils. In all fairness, it should be stated that she *could* use brass or crockery! Could superstition go any further?



It may be difficult for a modern and enlightened woman to realize how deeply rooted in darkness is this function on which

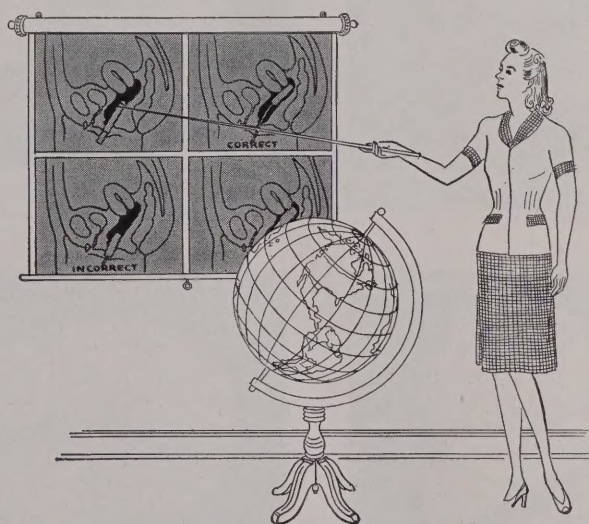
science has thrown much light for her benefit during the last few years. Primitive peoples — and civilized ones too — have surrounded menstruation with terrors and taboos, all leading to profound unhappiness for the unfortunate woman who has been the center of this interest. The oldest existing encyclopaedia, the Natural History of Pliny, blames the menstruating function for blighting crops, rusting iron, killing bees and many other things. From the Eskimos of the Arctic Circle to the Bushmen of Central Africa, similar notions of contamination or defilement are commonly held.

Perhaps the oldest and best-defined record of the “unclean” idea dates back long before Hippocrates. It states that the menstrual discharge enabled a woman’s body to rid itself of poisonous and harmful substances. The Greeks called the menstrual period the “Katharsis” — a term based on the thought that the monthly discharge represented a periodic purging of the impurities in the woman’s blood!

It would be pleasant to think that *all women* in our own time were free from such erroneous ideas, but it is not true. Call it superstition and taboo, call it modesty and delicacy, call it what we may, the fact remains that many up-to-date, intelligent women (intelligent in other respects) are not much further advanced in their knowledge of menstruation than the ancient Greeks.

The *younger* generation will be healthier and happier if taught that menstruation is not a separate and unrelated phenomenon, but simply a part of a continuous life-process extending from the early ‘teens to the menopause of middle age. . . . It is a function having no connection with sickness, being on the contrary thoroughly natural and wholesome.

It is hoped the foregoing introduction will emphasize by contrast the great advances that have been made, as dealt with in the subsequent chapters on “*Modern Scientific Knowledge*” and “*The Tampax Method*.”



Next chapter:
MODERN SCIENTIFIC
KNOWLEDGE

MODERN SCIENTIFIC KNOWLEDGE

The Menstrual Cycle

To THE woman or girl who is experiencing menstruation the process seems to be simply a periodic inconvenience. To the physiologist, however, menstruation is but a single phase of the complete menstrual cycle—a period which extends from the *finish* of one menstrual flow to the finish of the *next*. This cycle (of approximately 28 days) is composed of *four* “phases.”

First phase. This is the “resting” stage. The membranous lining (endometrium) of the uterus is very thin at this time, following the casting off at the previous menstruation. This resting or *postmenstrual* phase lasts approximately 5 days.

Second phase. This is called the *intermenstrual* stage or the “interval,” and it

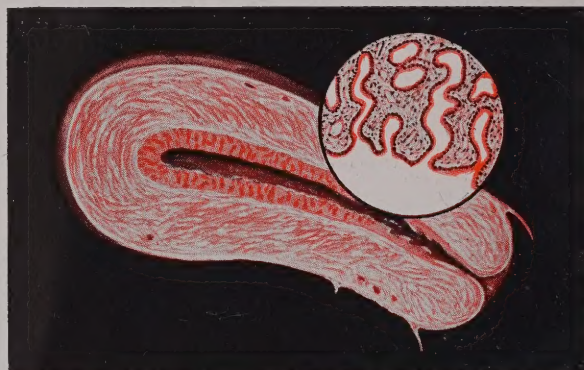
lasts about 14 days, during which the lining membrane begins to thicken again with increased blood vessel supply. About the fifth day of this phase a small sac or follicle in the ovary gland (which will be discussed later) breaks open and sends forth an egg (ovum) through one of the fallopian tubes to the uterus. This is called *ovulation*.

Third phase. This is the *premenstrual* stage (lasting about 5 days) during which the lining of the uterus becomes soft, thick and velvety, and on its surface the egg is received from the ovary. If fertilized, the egg remains embedded in this well-nourished tissue. Pregnancy follows and there is no menstruation.

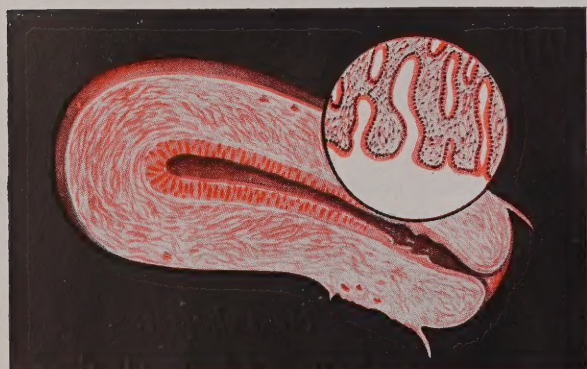
Fourth phase. On the other hand, if the egg is *not* fertilized, this lining begins to break down again and actual menstrua-



First phase—The postmenstrual or repair stage of the uterine endometrium.



Third phase—Premenstrual stage. The follicular hormones have stimulated endometrial growth.



Second phase—The endometrium is in the intermenstrual phase.



Fourth phase—The menstrual phase. The endometrium breaks down and blood escapes.

tion begins. The blood and shreds of tissue which form the menstrual flow are merely Nature's discard following the non-fertilization of the ovum. This last phase usually lasts about 4 days—so making the cycle of about 28 days.

It will be noted that menstruation is a purely normal, physiological process and a basically important function. It is in effect a periodic preparation for pregnancy and should therefore receive sincere respect and should carry no stigma and no association with the idea of "uncleanness."

The entire menstrual cycle is under the control of hormones from different glands of the body. The accompanying "Chart of Endocrine and Sex Organs" includes the more important of these glands. It is not possible here to enumerate all the factors influencing the menstrual function, but of outstanding importance are secretions from the ovaries and from the anterior lobe of the pituitary gland.

The Pituitary Gland

THE pituitary gland is located almost exactly in the middle of the head, suspended from the lower part of the brain. Though it is only about the size of a pea, it is a highly important organ.

This gland is composed of three parts, the anterior and posterior lobes—at the front and back—and an intermediate part.

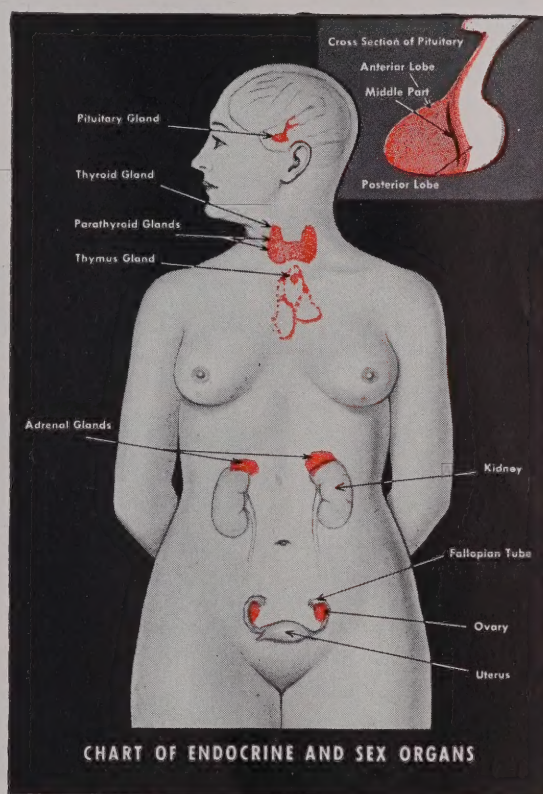
It is the secretion of the anterior lobe, however, which exerts the greatest influence on the menstrual cycle and especially affects the ovary. In fact, it has been called the "motor of the ovary." During a person's early life this anterior lobe regulates general bodily growth, but at the age of puberty (maturity) its activity becomes greatly increased and in a short period of a few months the individual acquires full powers of reproduction.

The Ovary

EACH normal mature woman possesses two of these glands—small, oval, flattened bodies about $1\frac{1}{2}$ inches long, 1 inch wide and $\frac{3}{4}$ inch thick. In infancy and in old age the ovaries are less than half this size. They lie on either side of the uterus and are attached to it near the fallopian tubes which serve for communication between the ovaries and the uterus.

The ovary is made up primarily of the follicles previously mentioned ("graafian follicles" they are usually called). A follicle may reach a diameter of $\frac{1}{100}$ of an inch. At birth each ovary has about 50,000 follicles, but comparatively few ever become physiologically active. Many disintegrate in childhood. By the time of the menopause the supply is exhausted. (Illustration of Ovary on following page.)

Each month during menstrual life, one follicle normally is singled out to become mature—how and why is unknown. A



central cell (the ovum or egg) changes its structural characteristics. A sac forms around the ovum and this sac fills with fluid and grows larger and larger till it bursts its wall and the contained ovum is thrown out of its follicle, out of the ovary and toward the open end of the fallopian tube nearby. This rupture or "ovulation" occurs, it is believed, about 10 days after the start of the resting phase of the menstrual cycle, or 14 days before the *onset* of the *next* menstruation.

On the remains of the graafian follicle new cells develop containing a specific hormone different in nature from the hormone of the follicle. This new body is called the corpus luteum.

Ovary-Pituitary Relationship

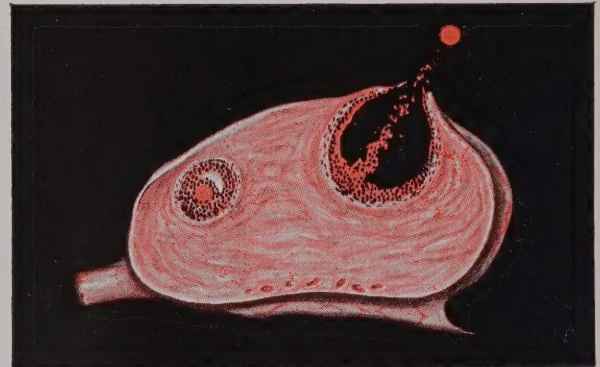
WE have mentioned that the changes which take place during the menstrual cycle are largely under the control of the hormones of the ovary and of the pituitary gland.

The interaction of these hormones is quite complex. The development of any particular graafian follicle (starting immediately at the end of the menstrual period) is influenced by the follicular-stimulated hormone from the anterior lobe of the pituitary gland. As the follicle matures, it in turn secretes the follicular hormone which affects the growth and development of the membranous lining of the uterus. After the rupture of the follicle, another hormone in the anterior pituitary, the luteinizing hormone, causes the development of the corpus luteum. This, as has been mentioned, takes place at the site of the ruptured follicle.

The corpus luteum produces two hormones, one of which causes the premenstrual changes in the lining of the uterus. At the same time it secretes increasing amounts of the follicular hormone. This gradually causes a reduction, in the pituitary gland, of the production of the hor-



A graafian follicle in the ovary is approaching maturity and the ovum becomes larger.



The mature ovum breaks out of the follicle and the ovum, falling close to open end of fallopian tube.



With escape of the ovum, the remaining follicle develops into the corpus luteum.



The corpus luteum has shrunk and soon will be absorbed, leaving a small retracted scar.

hormone maintaining the corpus luteum, which then gradually shrinks. In turn, its hormone-producing capacity ceases, the premenstrual lining disintegrates, and menstruation occurs. When the follicular hormone is no longer secreted by the corpus luteum, the anterior pituitary is again free to produce the follicle-stimulating hormone, and a new graafian follicle starts to develop. So another menstrual cycle commences.

General Remarks on Menstruation

THE actual menstruation should not be considered as having any special significance—not more than any other phase of the menstrual cycle. It is simply the evidence that fertilization has not taken place and Nature is about to prepare the membranous lining of the uterus for receiving another ovum. It is a normal, healthy process, surrounded by no particular mystery other than the mystery of life itself.

Although on the average the menstrual cycle is 28 days, it is unusual for any individual woman to have an absolutely regular cycle month after month. Perfectly normal women may have menses every 21 days or every 35 or even 40 days. There is no apparent relation between these variations and either health or fertility. The average flow per period is approximately 2 fluid ounces.

Menstruation itself is of variable duration, lasting from 1 to 8 days, though average is usually 3 to 5 days. Deviations are entirely compatible with good health, but if there should be marked change from what a woman considers her own “normal” it may be wise to consult a physician in order to be assured that no disorder is present that needs skilled attention.

Usually menstruation is not accompanied by any marked discomfort. Ordinarily only a sense of weight in the pelvis and perhaps some lassitude and nervousness are present.

On the other hand, many women feel better and are more energetic at this time than between their periods. However, in cases where severe or unusual pain does occur it is wise of course to seek a physician's advice. It was formerly believed that pain was a normal accompaniment of the monthly period. It has been found that improved clothing, physical freedom, systematic exercise, regular bowel function and healthier mental attitudes often quite markedly reduced the incidence of pain in a fairly short time. Pain is not a “normal” accompaniment of menstruation and should not be so regarded.

Many people still believe that a menstruating woman should greatly limit her activities, but in reality most women are not seriously inconvenienced by their menses. A woman may not be able to take very hot or very cold baths, but she may bathe as usual and, by using a proper menstrual tampon, she may even go in swimming without embarrassment to herself or offense to others. Recent medical literature states that there is no reason why the healthy female pilot without menstrual disturbances should not fly during the period.

Women have progressed a long way from the time when menstruation was surrounded by mystery and secrecy and when teachers and parents coddled those who had what they called “their sickness” and encouraged an attitude of unhappy martyrdom and sacrifice. It cannot be repeated too often that menstruation is not sickness. Ill health may affect menstruation, but normal menstruation is an evidence of *good health*.

Two Important Life Periods

Puberty, or the approach of the first menstrual period, should not be looked upon as a particularly distressing time. If the girl at this age has the entire matter explained to her intelligently, and if those in her confidence have a proper attitude of under-

standing, it may simply become in her mind what it really is — the beginning of a most important period of her life.

Ordinarily *menstruation* itself is likely to be regarded as the outstanding indication of puberty. Actually of course there are many others. The pelvis enlarges, the breasts become full and firm, the limbs round out. Graceful curves replace the angularity of the body. The intellect broadens and the complicated glandular mechanisms which govern sex begin to co-ordinate. There is no exact age at which the first menstrual period occurs. Usually it is established during the thirteenth or fourteenth year, but occasionally it appears as early as the ninth and as late as the seventeenth. Early menstruation is generally more common in hot climates and tropical countries than in the temperate zones.

Just as puberty may be dreaded by the unenlightened girl, so the menopause or "change of life" may be feared by the mature woman who is unfamiliar with what is happening physiologically. The principal characteristic of the menopause is the gradual cessation of ovarian function. As the ovary contains no ovarian follicles, ovulation can no longer take place. Usually the menstrual flow diminishes gradually, with "missed" periods, until finally the menses no longer occur, though sometimes the flow ceases abruptly.

In two-thirds of the cases the menopause occurs between the ages of 43 and 55 and the average age is 47. This "change of life" may start as early as 27 and as late as 56. Indeed, there are two records of regular menstrual periods until 66 and 73 respectively.

It has been found that in 85 per cent of women the menopause passes without any general disturbance. If symptoms do occur, a visit to a physician is indicated, for medical science has learned effectively how to control climacteric disorders. Certainly there is nothing to fear at this period of a woman's

life, and it may often prove that her happiest years lie ahead of her.

Many of the difficulties experienced at both of these periods of a woman's existence may be due to a faulty mental approach and a misunderstanding of the subject by herself and those around her. In this day of scientific enlightenment there is no excuse for a continuance of ignorance or misinformation.

Caring for the Menstrual Flow

WE have seen that primitive people had various ways of caring for the menstrual flow, but that these methods were not greatly different from those in use in Queen Victoria's time and even up to the beginning of the First World War. The chief requirement of course was a soft and absorptive material and the usual form was that of a nintercruel bandage, napkin or external pad. Some of these were intended for laundering and repeated use; others were "disposable."

However, under the influence of continual research, certain advances have been made in this field of monthly hygiene and sanitary protection. One method in particular has attracted the interest of physicians, nurses and women in general. This is called "tamponage" and the principle is *internal* absorption. For a number of years "tampons" of a home-made sort have been used by dancers, actresses, athletes and others who particularly wanted freedom from pins, pads, belts and other external appliances. Being worn internally, these "tampons" were both invisible and non-odorous.

Each of these changes in sanitary protection represented an improvement and a step forward. However, it was only with the introduction of TAMPAX (and its general availability in cities, towns and villages) that the high point of efficiency and comfort was reached among all the various methods of absorbing the menstrual flow.

THE TAMPAX* METHOD

AND ITS BENEFITS

TAMPAX is a small, tightly compressed tampon made of highly absorptive surgical cotton, of a type that has long been used by physicians for many purposes. Upon contact with moisture it gradually opens and adapts its flattened shape to the vagina's natural form.

Tampax is hygienic and easy to use. It cannot irritate the tissues nor act as a dam against fluids. It is completely invisible, of course, and if properly inserted it is so comfortable that the user is not conscious of wearing it.

In order to attain comfort and effectiveness, it is necessary to insert the Tampax high up in the vagina, well above the sphincter (muscles at the vaginal entrance). This is easy to do by means of the individual applicator in which each Tampax is encased (see illustration below). These applicators are made of paper fiber which disintegrates in water and is readily disposable. The Tampax itself, after use, is likewise disposed of.

Tampax permits complete personal ease and freedom from odor. While in place it does not interfere with evacuation of bladder or bowels. By the use of Tampax, infec-

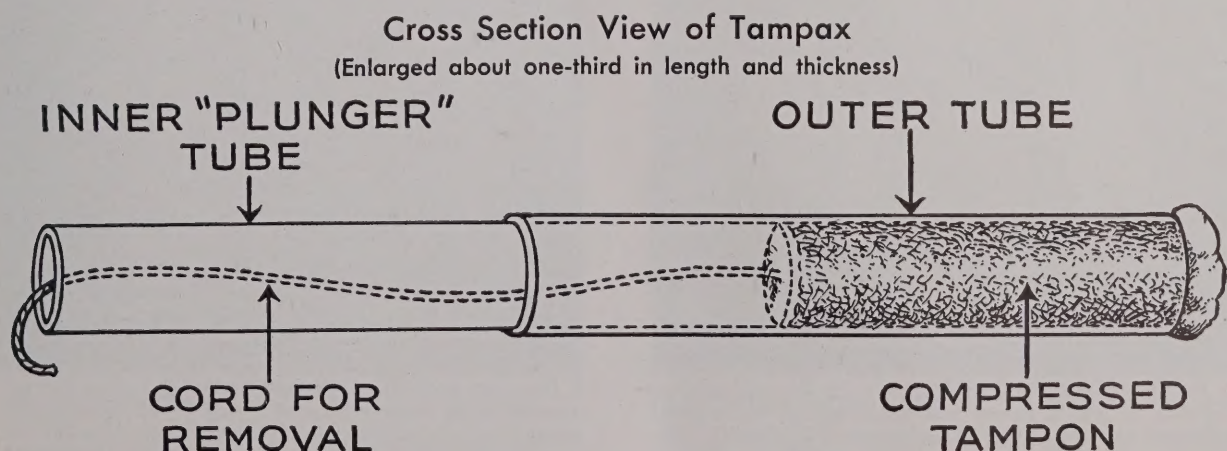
tion of fecal origin is not carried from the rear orifice to the front orifice—which may occur with external types of menstrual protection.

Tampax brings to the user a number of advantages and conveniences. In bulk it is less than one-eighth that of a comparable unit of external pads, whether one is buying it at the store, stowing it away in a drawer or carrying it in a purse while traveling. Then again, no odor can form, so that sanitary deodorants are unnecessary. Tampax is quick to change—a great advantage in public rest-rooms—and it cannot cause chafing.

The absence of pins, belts and external pads makes Tampax invaluable for wear with slacks, shorts, swim suits or sheer frocks, for Tampax causes not the slightest bulge, ridge or "line" beneath the clothing. Its "internal" character makes it possible to wear Tampax in shower, tub, pool or ocean. Aesthetically Tampax is a marvelous discovery for the woman who wants to swim during the menstrual period. With this method of sanitary protection she may do so without embarrassment or offense.

With the rare exception of the girl with hymenal orifice too small to accommodate

* Trade Mark Reg. U.S. Pat. Off.



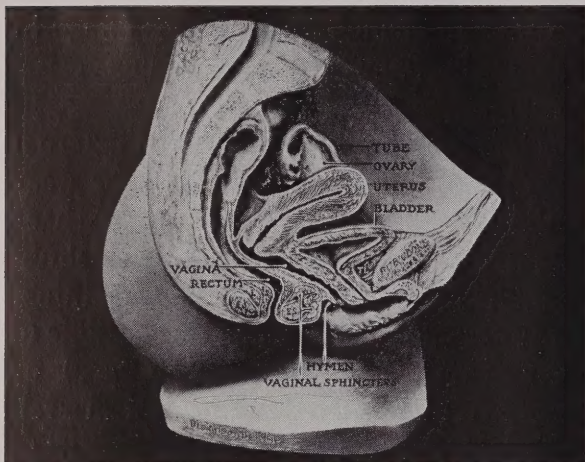
the entry of Tampax (which case is self-limiting), it may be safely worn by any normal woman. It is especially a great boon to the woman who, at the menopause, flows continuously for long periods. (For these cases and for cases of heavy flow generally, a "Super Tampax" has been designed, with about 50 per cent *extra* absorbency in each Tampax.)

Tampax has been enthusiastically adopted by a large and constantly increasing number of women in all six of the world's continents and in many island

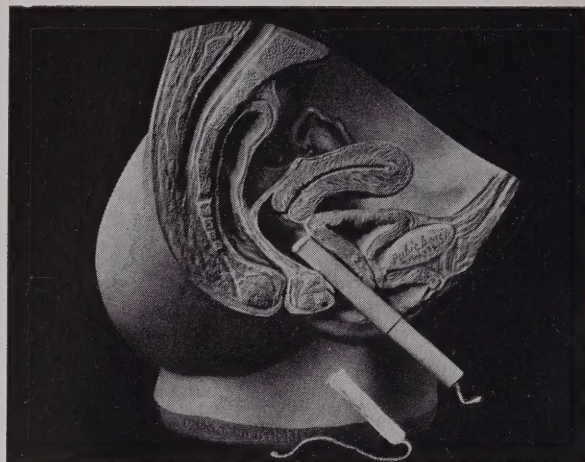
countries as well. It has already met with the approval of thousands of nurses and physical training teachers. Also, Tampax is accepted for advertising by the Journal of the American Medical Association and other leading medical journals. Members of the medical profession have subjected Tampax to much clinical investigation and we are pleased to reproduce abstracts of their reports on the following pages. It will be noted that these findings cover a considerable range in subject matter and point of view.

These Models Explain The Anatomical Principle of Tampax

(Prepared under the direction of Robert Latou Dickinson, M.D.)



1. Model showing reproductive organs of woman. The muscles which loop around the entrance to the vagina (the sphincter group) hold it closed and serve to keep the tampon in place.



2. Position of Tampax in vagina before Tampax tampon is expelled from applicator. Note correct slant of insertion. Observe that vagina is not open at top so tampon cannot be "lost". (Below) Note small size of Tampax tampon compressed for insertion.



3. Properly placed well up in the vagina Tampax tampon expands flat and is secure without tension of the vaginal sphincter muscles. Urination and evacuation effected without removal. Moisture-resistant cord prevents transfer of urine into vagina.



4. Incorrect position of Tampax tampon in vagina. On expansion it may distend sphincter group muscles causing discomfort and absorb urine. Be sure to insert above sphincter muscles. Complete comfort is achieved by proper placement.

(Printed Enlargements of these anatomical models for instructional purposes are available on request.)

MEDICAL REPORTS ON TAMPAX

The Intravaginal Tampon in Menstrual Hygiene

Maurice O. Magid, M. D. (deceased) and
Jacob Geiger, M. D.
New York, N. Y.

Twenty-five women (parous and non-parous), ranging in age from twenty-one to forty-five, were studied under daily institutional observation during two successive catamenial periods to determine whether any subjective or objective changes occurred due to the use of sanitary tampons.

Before tampons were used, each subject was thoroughly examined to determine the following: 1, whether the perineum was relaxed or firm; 2, whether the cervix was lacerated, infected or eroded; 3, whether the uterus showed any abnormality as to size, position and mobility; 4, whether the adnexa showed the presence of inflammatory conditions or abnormal organic changes.

"The selected subjects did not present any clinical subjective or objective evidence of marked inflammation or other unusual pathology. They can be considered fairly representative in a gynecologic sense of the average nullous and parous woman respectively."

It was observed that, "with a tampon of proper size, absolute comfort and complete control of the flow can be obtained."

From the various clinical, bacteriological and other examinations, the following conclusions were reached:

"1. In not a single instance was there any evidence of local irritation brought about by the use of the tampons.

"2. No uterine cramps, suggestive of block of the uterine flow or damming back into the tubes were reported in any case of this series.

"3. No bladder irritation was reported.

"4. The average number of tampons used in a period was ten.

"5. In cases in which a cervical erosion was present neither the amount of bleeding nor the character of the erosion was altered by the use of tampons.

"6. There was no appreciable difference in the bacterial flora of the vagina and cervix, as determined by smear and culture before menstruation and after the use of the tampons during the menstrual period.

"7. There was no appreciable difference in the pH of the vaginal or cervical secretions before menstruation and after the use of the tampons during the menstrual period.

"8. Absolute comfort and complete absorption of the flow was obtained by the proper correlation of the size of the tampon with the length and caliber of the vagina.

"9. The evidence is conclusive that the tampon method of menstrual hygiene is safe, comfortable and not prejudicial to health."

(Abstracted from Medical Record, vol. 155, p. 316, May, 1942)

Vaginal Tampons For Menstrual Hygiene

Karl John Karnaky, M. D.

From the Department of Gynecology, Research
Division, Jefferson Davis Hospital, Houston, Texas

A STUDY was made of 2,340 cases in which vaginal tampons were used, to determine whether such use was in any way injurious.

In 2000 cases two to four tampons were used, together with an acid jelly or tablet, as a vaginal pack after conization of the cervix. The tampon was changed as required, sometimes only once a week for three or four weeks. No irritation resulted nor was there any odor.

Tampons were employed as catamenial protection during the menstrual period by 110 unmarried nurses from 18 to 21 years

(Reprints of Complete text of these reports will be sent upon request.)

old, to their entire satisfaction, demonstrating that this method of protection is suitable for use by unmarried women. The tampons were used through the entire period by 95 per cent of the young women. Only 5 per cent could not use them in the middle of menstruation, "and in these cases the flow was excessive."

In addition, tampons were employed by 218 women regularly during menstruation for one year or more without any irritation, discharge, vaginitis or cervicitis being produced. Large tampons were given to 42 women who inserted them night and morning both between and during their menstrual periods for six months to two years. Results were, with hardly an exception, "most favorable. The vaginas which were normal remained so. The abnormal vaginas became normal. The bacterial flora became normal in the abnormal cases. The vaginal pH remained or returned to normal. The vaginal biopsies showed no abnormal changes and there were no changes on gross examination." In 47 cases vaginitis disappeared. "On observing over 500 private patients using vaginal tampons during menstruation, in not one have I observed any harm."

Where tampons were advocated "in an effort to overcome sterility, two women became pregnant within six months" after such use.

It was also demonstrated that tampons do not block the flow, nor do uterine cramps result from their use. "... Six women who were bleeding profusely were packed (vaginally) very tightly with cotton, not omitting the external os. After one to six days an inspection during laparotomy demonstrated that in none of the cases was there any blood backed up into the tubes or peritoneal cavity. . . . Tampons actually acted as a wick to draw away the blood from the cervix."

Tampons were found to overcome the problem of menstrual odor. "This has definitely been shown by us and other investi-

gators, as in cases of trichomonas vaginitis and other vaginal infections."

Tampons were found to be comfortable and to help the psychological attitude toward menstruation.

The author concludes: "Vaginal tampons, by this research, have been shown to be free from harm or irritation to the vaginal or cervical mucosa."

(Abstracted from Western Journal of Surgery, Obstetrics and Gynecology, vol. 51, p. 150, April, 1943)

Vaginal Tampons for Menstrual Absorption

Harry S. Sackren, M. D., Brooklyn, N. Y.

In a group of twenty-one cases which used tampons the results were uniformly satisfactory in every way.

The author found the popularity of internal absorbents for menstrual sanitary protection increasing extensively but a dearth of scientific reports in the literature and little factual information among physicians regarding the desirability of their use. These circumstances prompted him to make a clinical study of the subject, and for this purpose he used 21 female teachers, office workers, domestics and housewives, ranging between 19 and 38 years of age, including both married and single individuals, parous and nonparous. These cases were studied for from 3 to 5 months.

The tampon used was a 2 x 4 inch strip of cotton stitched across the fibers, compressed into a cylinder and provided with a disposable applicator and a cord to facilitate removal of the tampon. The average 3 gm. tampon absorbed 31 cc. of fluid when placed in oxalated beef blood.

RESULTS: Protection was complete in 18 (90 per cent) of the cases and in 68 (94 per cent) of the 72 periods recorded. Protection was incomplete in 2 cases (10 per cent), external pads being required during part of the period.

A study at the University of Iowa showed

TABULATION OF RESULTS												
No.	MARITAL STATUS	CHIL-DREN	AGE	OCCUP.	TEST PER MOS.	TAMPONS USED		PROTECTION	DISCOM-FORT	VAG. & CERV. CHANGES	INFEC-TION	SUBJ. FEELING
						Mo. Avg.	TOTAL					
1	mar.	1	24	Hswf.	5	8.6	43	Complete	None	None	None	Pleased
2	mar.	0	19	Hswf.	4	9.0	36	Complete	None	None	None	Pleased
3	mar.	0	21	Off. Work	4	6.25	25	Complete	None	None	None	Pleased
4	mar.	0	22	Hswf.	4	8.0	32	Complete	None	None	None	Pleased
5	mar.	1	38	Hswf.	3	6.67	20	Complete	None	None	None	Pleased
*6	mar.	2	31	Hswf.	1	10.0	10	Complete	None	None	None	Pleased
7	mar.	2	38	Hswf.	4	8.0	32	Complete	None	None	None	Pleased
8	mar.	0	32	Teacher	4	6.25	25	Complete	None	None	None	Pleased
9	mar.	0	28	Hswf.	5	6.8	34	Complete	None	None	None	Pleased
10	mar.	0	30	Teacher	5	8.0	40	Comp. 4 mos. Part 1 mo.	None	None	None	Pleased
11	mar.	1	26	Hswf.	3	7.33	22	Complete	None	None	None	Pleased
12	mar.	0	35	Hswf.	3	6.33	19	Complete	None	None	None	Pleased
13	mar.	2	33	Hswf.	3	9.33	28	Partial	None	None	None	Pleased
14	sing.	-	27	Domestic	3	8.33	25	Complete	None	None	None	Pleased
15	sing.	-	23	Domestic	3	10.33	31	Complete	None	None	None	Pleased
16	sing.	-	22	Domestic	3	6.33	19	Complete	None	None	None	Pleased
17	sing.	-	25	Domestic	3	6.67	20	Complete	None	None	None	Pleased
18	mar.	0	28	Hswf.	3	8.67	26	Complete	None	None	None	Pleased
19	mar.	0	34	Hswf.	3	10.0	30	Complete	None	None	None	Pleased
20	mar.	0	30	Teacher	3	7.0	21	Complete	None	None	None	Pleased
21	sing.	-	20	Domestic	3	12.33	37	Complete	None	None	None	Pleased

* Did not return after first month.

(The tampons used in these tests were *Regular Tampax*. Since this research, *Super Tampax* with 50% higher absorption, have been made available.)

that the normal menstrual flow (100 women) averages 50.55 cc., the range being from 6.55 to 178.69 cc.

Irritation was absent in every case. The squamous epithelium of the vaginal canal is probably less likely to become irritated by a tampon than the vulva (hair follicles, sweat and sebaceous glands) by an external pad.

Capillary action apparently carried the discharge away from the cervix, otherwise there would have been some pain, irritation, congestion.

Infection did not occur in any of these cases. The possibility of spreading infection from the rectum to the vagina is greater when an external pad is used.

Odor was reported by some patients to have been eliminated — an important aesthetic and psychologic factor.

Subjective reaction was favorable in all patients, after tampons had been used. Points mentioned were freedom from chafing and itching; elimination of "wet feeling" or odor; freedom to indulge in sports; elimination of pins, belts and pads; ease of urinating and defecating.

(Condensed from *Clinical Medicine and Surgery*, Vol. 46, p. 327, 1939 for appearance in *Current Medical Digest*, Dec. 1939)

Swimming During the Menstrual Period

Grace Thwing

George School, Pennsylvania

During her quarter of a century's experience in health work with some twenty-six hundred adolescent girls (work which has brought her into personal contact with many physicians, nurses and teachers), the author has noted a great change in attitude toward menstruation and the physical activity in which girls may engage at this time.

She considers that "the menstrual period is a normal function and should be free from discomfort. In the great majority of cases, girls nowadays continue their habitual activities during those days."

At the George School, the girls are encouraged "to continue their normal exercise so far as possible." Those who cannot are given an individual regime of rest and special exercises. When occasion demands, students are taken care of by the school

doctor or referred to their family physician or a gynecologist.

The daily bath is considered essential to personal hygiene.

More and more girls are accustomed to swimming during their periods, and it was noted that "the interval between (periods), length, flow and comfort were not affected at all."

The advisability of using tampons during the menstrual period was carefully studied and various types were investigated. The use of tampons has increased yearly. When difficulty was found in its insertion, the girl was referred to her family doctor.

Because girls who used tampons were accustomed to swimming during their menstrual periods, they asked permission to use the school's pool during that time. "We

finally decided to allow the girls with parental permission to swim during their period if they used tampons." The number availing themselves of this privilege increased as time passed. "Not a single girl has suffered any ill effect. There has been no discomfort, no fatigue, no change in the interval, length or amount of flow. I keep in close contact with the girls and I am convinced (after twenty-two years) that the girls have benefited by our regime, not only physically, but in having a more sensible and normal attitude toward this function."

The author concludes that "the use of tampons makes it possible for many girls to enjoy without interruption one of the most pleasant and beneficial sports — swimming," although of course any girl suffering ill effects should consult her physician.

(Abstracted from The Journal of Health and Physical Education, vol. 14, p. 154, March, 1943)

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ANSWERS TO QUESTIONS

Seldom has a new product achieved in a short time a success equal to that of *Tampax*. Club women, housewives, war workers — by the thousands — have welcomed *Tampax* as a friend and emancipator . . . Of course the principle has long been known to the medical profession, but *Tampax* makes it available to women generally.

What is Tampax?

Tampax was perfected by a doctor to absorb the monthly menstrual flow. But unlike the external pad, *Tampax* does the absorbing within the vagina, and the user is not aware of its presence.

How does Tampax stand with doctors?

Tampax has been clinically tested and is recommended by many gynecologists and family physicians in the course of their regular practice. Also, *Tampax* has been *accepted for advertising by the Journal of the American Medical Association*.

Is it comfortable?

Tampax is designed to flatten out when in use, conforming to the shape of the vagina. It can cause no chafing or irritation. It requires no harness of belts, pins or pads, and produces no embarrassing bulges or ridges to show through the clothing. When properly inserted, you won't even know it's there.

Does the use of Tampax cause odor?

No. As there is no contact with the air, the use of *Tampax* causes no odor. Therefore, no sanitary deodorant is required.

What makes Tampax so absorbent?

It is made of long-fibered, absorbent surgical cotton, greatly compressed. This expands softly and gently when in contact with moisture. The package of 10 Regular *Tampax* is designed to absorb more than twice the average monthly flow, thus providing a liberal margin of safety.

Is Tampax easy and dainty to use?

Yes. Each *Tampax* comes in an individual applicator tube, making insertion simple, easy and quick. It is disposed of like paper. *This applicator feature is very important, as it*

makes the insertion of Tampax a dainty operation and permits proper placement.

Are there any exceptions?

Any normal woman can use *Tampax*. In exceptional cases young girls may find it difficult to use properly. If there is any doubt a physician should be consulted.

How is Tampax removed?

By means of a small protruding cord, the *Tampax* is easily removed and may be immediately flushed down the toilet. The cord is firmly stitched into the cotton, thus preventing disintegration. Another point: the bladder may be emptied or the bowels moved, without disturbing *Tampax*.

Can it become dislodged?

No. *Tampax* can be trusted to stay in place even during strenuous exercise, because it gently expands to fit snugly within the vagina.

Will Tampax stop or check the flow?

No. It acts merely as an absorbent. Its positive wick-action absorbs the flow in a natural manner — does not *stop* it.

How often should one change Tampax?

Individuals vary in their needs. Experience will soon tell you how often, depending on which absorbency you are using — Regular, Super or Junior.

Do many women use Tampax?

Tampax is one of the fastest-growing products in the country. New users are discovering its advantages daily. Progressive women, conservative women — smart girls, sensitive girls, dainty girls—*Tampax* has an appeal for nearly all kinds. The users of *Tampax* already are numbered by the million — in the Americas, Europe, Africa, Asia and Australia.

Complete directions in every package.

Follow the *Tampax* directions and join this army of up-to-date women who have found they can wear the sheerest gown or the most modern swim suit without embarrassment. *Tampax* comes in three sizes: Regular, Super, Junior. A month's supply of any of these sizes can be carried in your purse . . . For sale at drug and notion counters.

(The above Questions and Answers are embodied in a folder suitable for distribution to students, available on request.)

A VARIETY OF TAMPAX SIZES AND ABSORBENCIES

TAMPAX is designed for use throughout the *entire* menstrual period, and three different absorbency-sizes are provided, as follows:

Regular Tampax: For the woman of average flow. Each Regular Tampax has a laboratory absorbency in excess of one fluid ounce. However, in actual use Tampax will not ordinarily be used to the limit of its absorbency and this should not be overlooked when considering the question of frequency of change. Comes in packages of 5, 10 and 40 (the economy box).

Super Tampax: This is about 50% more absorbent than Regular Tampax, being designed for those who need extra protection: for instance, during the day or two of heaviest flow. Comes in packages of 5, 10 and 40.

Junior Tampax: This is smaller than Regular Tampax, and about $33\frac{1}{3}\%$ less absorbent. Designed for the younger woman and for waning days and light flow generally. Comes in packages of 5, 10 and 40.

The Doctor Talks About Menstruation

EVA F. DODGE, M.D.

ALL women and girls are interested in those physical events within their own bodies which set them apart and characterize them as women. A group of periodic changes takes place in every woman which physicians call ovulation and menstruation. The start of the changes is known as puberty and the end as menopause.

Menstruation has carried with it throughout the ages mystery, superstitions, an eerie connection with the cycle of the moon. This has caused fear and misunderstanding in women, which have in turn brought about unnecessary suffering from this most natural function. Only in the past few years has science thrown light on the subject and begun to free us from our superstitions.

Primitive peoples had many taboos, some of which have hung over into the twentieth century. The most frequent of these was that the menstruating woman was unclean, that whatever she touched would be harmed.

Today, we recognize this function to be purely physiological and no handicap to the modern woman who understands the physiology of ovulation and menstruation, the latter being the outer evidence of the completion of the reproductive cycle.

1. *Just what is menstruation and why is it necessary?*

Nature has provided that the lining of the uterus (womb) be amply supplied with blood vessels and glands so that when the ovum (female egg) is fertilized, a "bed" is ready for it, also that the food supply for the new "roomer" is adequate. When a pregnancy does not occur, all these preparations are discarded, and we call this discarding, menstruation. Just as we make fresh preparation for our own guests, so Nature sees that the uterus, which is to be the nine months home for the baby, is freshly prepared each month.

2. *Do all women menstruate every month?*

The majority of women ovulate every twenty-six to thirty days and menstruation occurs as we said before, because they are not pregnant. Usually after the first year of menstruation the girl or young woman will settle into a cycle of her own. Regularity is important, and so one must keep track of menstrual dates. Too great variance of the normal cycle may spell trouble.

3. *How long should a period normally last?*

This varies with each individual; usually from three to six days.

4. *How old should a girl be when she first menstruates?*

This varies in different families and even among members of one family. The average age is between twelve and fifteen years in this country. But a variance of this in either direction may be considered normal for some individuals. If a girl has not menstruated by the time she is seventeen or eighteen, she should see a physician.

5. *Why is the menstrual period referred to by so many women as their "sick time"?*

This is just a hangover of the old superstitious attitude toward the menses. All menstruating women should be healthy. While ill health may affect one's period, normal menstruation is one evidence of a healthy woman.

6. *Is it normal for me to have pain enough to interfere with my work?*

No. Pain severe enough to keep a woman from work, means that she should consult a physician. Of course it is always well to take good care of oneself at all times and especially during this period. Proper rest, exercise, diet and good elimination are the fundamentals of good health and should be carefully observed during menstruation.

7. *If a woman has peculiar or unusual reactions immediately before or during her period, is this abnormal, or is there a physiological cause for it?*

Some women have slightly swollen or tender breasts, or are depressed, or may become easily fatigued, or have insomnia, while a few may be exhilarated. All of these are readily understandable when you realize that menstruation occurs because there is no pregnancy. All the preparations, therefore, which have been made by the body, now have to be discarded. In this process, various physical changes take place. These are normal, but may be more pronounced in some women than in others. Unless they are greatly exaggerated one may consider any of these things within the normal limits.

It is important for every woman to remember that menstruation is a natural process and that many of these reactions may be present in varying degrees—sometimes so slight that one is not conscious of them. It is only when they occur suddenly or are exaggerated that it is necessary to consult a physician.

8. *Should women in factories stay home for one or two days every month at this time?*

Not if they are in good healthy condition. One industrial counsellor of a large industry whom I interviewed gave as one of the greatest causes of absenteeism among women, time off during the first few days of the menstrual period. In most cases this woman said the condition was cleared up readily when a doctor was consulted. Many of these women needed only to understand that menstruation is a normal physiological function, that one does not need to "baby" oneself during that time, that it is not harmful to work through one's period, providing no undue strain is involved. Simple, supervised exercises were given women absentees for this cause in another factory. Those who did not improve were put under medical care, with the result that the absentee rate among the women took a sharp drop.

9. *Is it safe to take baths during menstruation?*

It is not only safe but very beneficial, in fact, essential for the fastidious woman. If a woman prefers showers, even cold ones, and is accustomed to them, there's no reason why they cannot be continued during menstruation. Of course, if a change in duration or amount of flow occurs, they should be discontinued. Warm, not hot baths, are usually most satisfactory.

10. *Should I go swimming during menstruation?*

Many girls do, without untoward effect. Some schools have felt it inadvisable to allow pool swimming but since the advent of the use of tampons, girls are permitted to swim during menstruation. Common sense is necessary as the best judge of whether or not one should swim during this time.

11. *Are tampons, which you mentioned, perfectly safe?*

Yes, they do not block the flow nor do they cause irritation. They are comfortable if properly inserted and of the right size. It is important that they be changed as frequently as any other type of protection.

12. *Can unmarried girls use them?*

Some girls can and others cannot. This will depend upon the size of the opening of the hymen. Tampons are made in several sizes. They should not cause pain when inserted, though at first there may be a little discomfort. It is always wise to consult a physician if the tampon is not inserted easily at first, if one wishes to use this form of protection.

13. *If my periods become irregular, if the amount and length of time of my menstrual flow varies, should I consult a physician, even though I feel well and have no pain?*

By all means, yes. It may mean only some minor adjustment of your general physiology, or even a change of climate, but your physician is the best one to judge.

14. *How many years will I menstruate?*

This again varies with the individual. Nature has given some women an abundant number of ova (cells) and just as long as they continue to mature, so long will she menstruate. The cessation of ovulation, and therefore of menstruation, occurs for most women when they are between forty and fifty years of age, although some start the menopause earlier and others continue for several years longer. Women have also been known to conceive after they thought they had reached their menopause, but this is uncommon. The menopause may be abrupt or gradual. When the latter, the ovaries cease to function for a few months and then resume their activities for a month or two. Pregnancy can occur with this ovulation

and of course no menstruation would follow. The woman would not know she had resumed ovulation until the pregnancy became evident.

15. *Is there any connection between menstruation and the cycle of the moon?*

None at all. The ancients always struggled for a factual explanation of the phenomena of nature and were struck with the coincidence of the menstrual cycle of woman and the lunar cycle, both occurring within the period of a month. Hence the superstitious "explanation" for woman's monthly period.

Menstruation, due to hangovers of mystery and superstition, is regarded by too many young women literally in the term often used for it, as "the curse." It is too often considered one of the trials and crosses of being a woman. One reason so many women allow themselves to become "monthly invalids" is the vast self-pity they feel for having to endure this physical inconvenience over such a period of years. The sensible modern girl, however, unlike her mother and grandmother, refuses to consider this manifestation of nature's ample provision for continuing the species as a curse or a sickness.

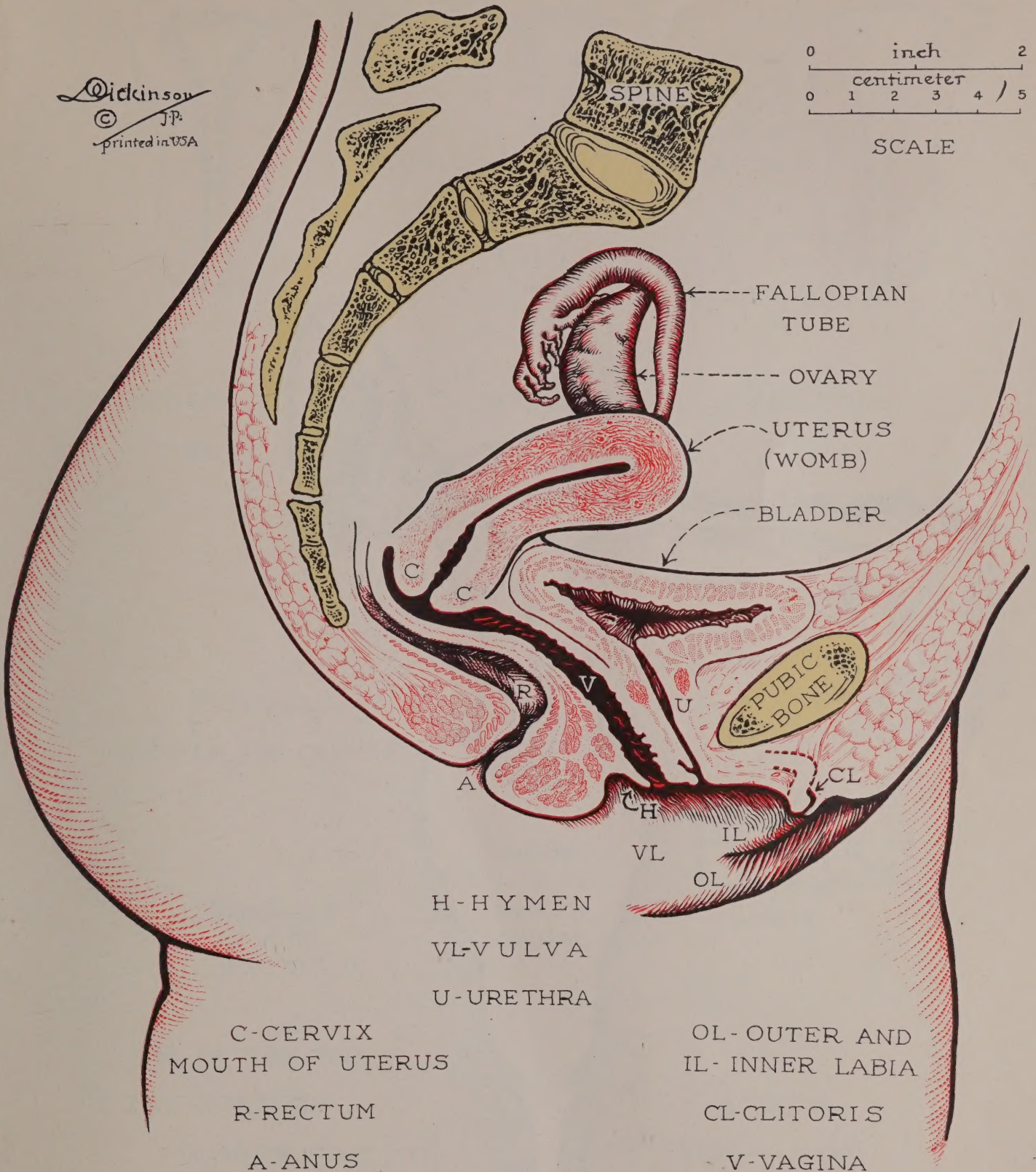
She dances, swims, works in the factory or office, carries on as normally and effectively as she does during the rest of the month. No more blushing behind fans and shy excuses for sitting apart and not partaking of the fun. The modern girl knows menstruation as a normal physiological function. Frequently her energy is increased, her creative abilities are stepped up during this period when nature is reminding her of one of the most important functions of her body, the continual cycle of preparation for the bearing of children.

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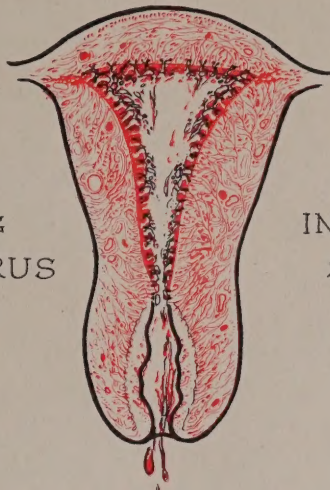
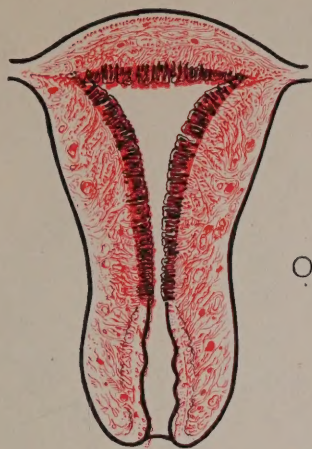
FEMALE PELVIC ORGANS

Educational Department, Tampax Incorporated, New York, N.Y.

PREMENSTRUAL

MENSTRUAL

POSTMENSTRUAL



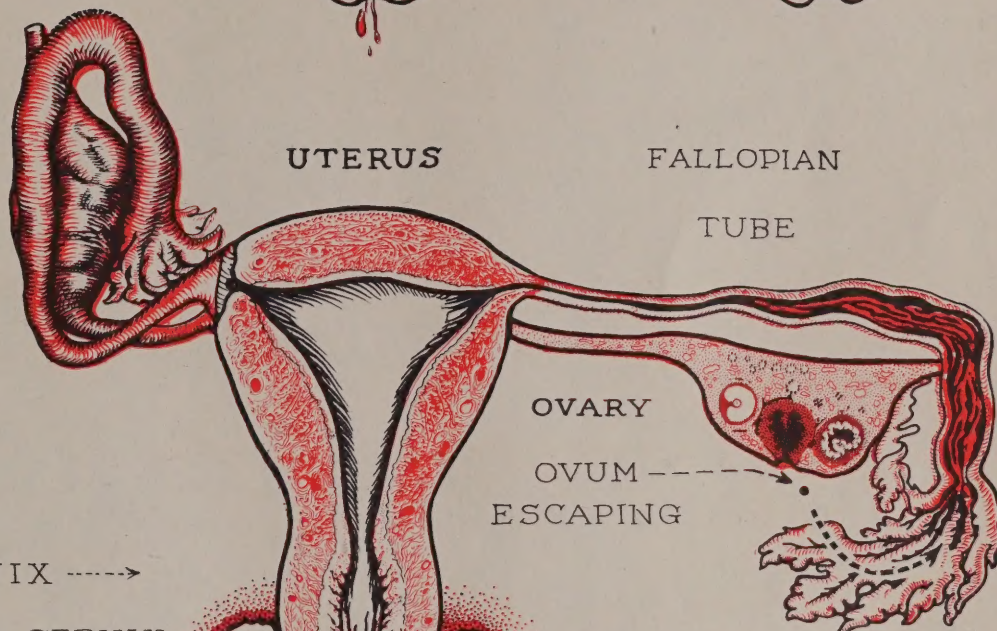
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ONE OF THE PAIR
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GLANDS ----->

HYMEN

INNER LABIA

VULVA

FEMALE REPRODUCTIVE ORGANS

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